

**ABSTRACT**

An apparatus and method of the present invention includes implementing an automatic repeat request (ARQ) protocol in a DOCSIS wireless environment for fixed wireless applications. More specifically, an ARQ protocol is implemented at the medium access control (MAC) layer to provide fast response relative to convention ARQ protocols and logic that are implemented at higher layers (e.g., TCP/IP) in the OSI layered approach to system architecture and design. To achieve this result, a DOCSIS defined signal and header is modified to include an ARQ header containing various ARQ parameters. While some known approaches to ARQ involve retransmission of entire frames or blocks, the present invention contemplates provide control down to the packet data unit (PDU) level. To achieve this level of granularity, the ARQ header includes sequence numbers within each ARQ header. Accordingly, a transmitter retransmits a lost transmission whenever it receives a “non-acknowledge” signal advising it of the failure and of the identity of the missing PDU.

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